Remarks

Claims 2-10 and 12-27 remain pending.

Interview Summary

Applicants thank the Examiner for discussing this application during a telephonic interview on March 20, 2008. As summarized in the interview summary prepared by the Examiner, the differences between U.S. Patent No. 6,501,947 (Hunzinger) and claim 12 were discussed. The Examiner agreed that Hunzinger does not teach **a previously established data connection** as claimed.

The Examiner suggested that an appropriate response to the Office Action dated January 7, 2008, be filed taking into account the discussions of the telephonic interview.

35 U.S.C. §103(a) rejections: Hunzinger and Virtanen

The Examiner rejected claims 2-6, 9, 10, 12-16, 18 and 21-27 as being obvious over U.S. Patent No. 6,501,947 (Hunzinger) in view of U.S. Patent No. 6,249,681 (Virtanen). Applicants respectfully disagree for at least the following reasons.

As discussed during the telephonic interview and as agreed by the Examiner, Hunzinger simply does not teach a previously established data connection. For completeness and continuity, Applicants resubmit previously presented arguments is support of lack of teaching of previously established data connection by Hunzinger.

Excerpts from Pre-Appeal Brief Request for Review

In our response to the Final Action dated May 8,2007, at pages 2-5, we presented arguments indicating that Hunzinger does not teach or suggest all the claimed limitations; that there is no teaching or suggestion in Hunzinger to modify its teachings to arrive at the claimed invention; and that, even if Hunzinger were modified, there would be no reasonable expectation of success and such modification would not result in the invention as claimed herein. We direct the pre-appeal panel to those arguments, which we believe should be convincing on their own.

In order to demonstrate that the rejection is clearly deficient, we reproduce column 2, lines 22-29 of Hunzinger, which the Examiner has quoted, in support of his rejection, at pages 2 and 3

of the Office Action dated May 8,2007:

> Another aspect of the present invention is a timer setting circuit for use in a mobile communication system. The timer setting circuit comprises a reconnection timer and a timer setting circuit. The timer setting circuit sets the reconnection timer to a value after a failed connection attempt between a mobile station and the mobile communication system. The timer setting circuit determines the value of the reconnection timer is based on a set of data regarding connection requests [emphasis added].

Accordingly, at a very basic level, this excerpt teaches that the reconnection timer of Hunzinger is a timer having a time value set by a timer setting circuit after a failed connection attempt. In addition, we respectfully direct the pre-appeal panel to the operation of the reconnection timer described at least at Fig. 2 and its related text at column 4, lines 8-27 of Hunzinger. No connection has been previously established, as recited in pending claim 12.

Even if we were to ignore the details of the claim 12, Hunzinger simply does not teach or suggest the step of *determining, at minimum fixed time intervals determined by a service check timer, the status of a previously established data connection*.

Lack of *prima facie* case for rejecting claim 12 and claim 21

Independent claim 12 reads (emphasis added):

> A method of automatically maintaining a previously established data connection on a wireless data network, comprising:
> determining, at minimum fixed time intervals determined by a service check timer, the status of the previously established data connection;
> automatically transmitting a connection request if the previously established data connection is determined to be lost; and
> re-establishing the previously established data connection if the transmitted connection request is accepted by the wireless data network.

Further, independent claim 21 reads (emphasis added):

> A mobile device for establishing and maintaining a data connection to a wireless data network, the mobile device comprising:
>
> a back off timer for timing a back off period between retries to establish the data connection;
>
> a service check timer for setting a minimum fixed interval after which a previously established data connection is checked to determine if it has been lost; and
>
> a connection manager for determining if the previously established data connection between the mobile device and the wireless network exists or has been lost; for resetting the service check timer upon its expiry if the data connection exists; for transmitting connection requests to the wireless network upon initialization, upon expiry of the back off timer, and upon expiry of the service check timer if the previously established data connection has been lost; and for resetting the back off timer in response to receipt of a connection rejection from the wireless network.

As previously discussed and agreed upon, Hunzinger does not teach previously established data connection. The Examiner, at page 4 of the Office Action dated January 7, 2008, states that, "Virtanen teaches re-establishing the previous established data connection if the transmitted connection request is accepted by the wireless data network (see Abstract, column 1, line 59 to column 2, line 4, column 5, lines 1-15 and column 12, lines 24-58)."

Virtanen teaches a method and apparatus for packet data call re-establishment in a telecommunication system. Virtanen does not disclose, "*determining, at minimum fixed time intervals determined by a service check timer, the status of the previously established data connection.*" Neither does Virtanen teach or disclose, "*a service check timer for setting a minimum fixed interval after which a previously established data connection is checked to determine if it has been lost.*"

In contrast, Virtanen is concerned only with "re-establishing an interrupted data packet call on a channel between two transceiving devices in a telecommunications system" (emphasis added, see Abstract of Virtanen).

The passages cited by the Examiner are general procedures involved with the re-establishment of a call. Specifically, column 1, line 9 to column 2, line 4 of Virtanen describe that, "systems based on the GSM standard may support a mobile station triggered call re-establishment procedure that uses a call re-establishment message that includes only the subscriber identity of the mobile station and the mobile station's classmark." The cited passage further recites the details associated with the re-establishment procedure according to GSM standard.

Column 5, lines 1 to 15 of Virtanen summarizes an embodiment disclosed therein for re-establishing a call using a re-establishment request message. Column 12, lines 24 to 58 of Virtanen further describe in detail the embodiment for re-establishing a call using re-establishment request message with reference to Figures 7A and 7B.

Nowhere does Virtanen teach the determination of the status of a previously established data connection at minimum fixed intervals set by a service check timer, as recited in claim 12. Nor does Virtanen teach a service check timer for setting a minimum fixed interval after which a previously established data connection is checked to determine if it has been lost, as recited in claim 21.

In fact, Virtanen teaches three different timers none of which is a service check timer for setting a minimum fixed interval after which a previously established data connection is checked to determine if it has been lost. The various timers disclosed by Virtanen are discussed below with reference to Figure 4 of Virtanen.

Virtanen discloses an inactivity timer upon expiry of which " a release order message is formatted with MS 10. The release order message is a modified IS-95 release order that functions to indicate to network 32 that call re-establishment is possible with call release" (see column 9, lines 5 to 9 of Virtanen). Thus, the inactivity timer of Virtanen automatically releases an established packet data call due to inactivity and does not maintain an always-on connection as claimed herein.

Virtanen discloses a second timer, a release timer, which is started upon receipt, from the base station, of a return "release order message 912 in response on the forward traffic

channel" (see column 9, lines 63 to 65 of Virtanen). The base station saves the current service configuration information and releases the call after the expiry of the release timer. The release timer of Virtanen is simply not the same as the service check timer claimed herein.

Virtanen further teaches a third timer, a re-establish timer, which is started by the MS after releasing the call at the MS side. According to Virtanen, "the re-establish timer determines how long call configuration information is saved, without either the MS 10 or MSC 34 initiating re-establishment, after a call is released with a re-establishment possible indication in the call release message" (see column 10, lines 28 to 32 of Virtanen). Furthermore, Virtanen states that, "at step 420 it is determined if the re-establish timer in either the MS 10 or the MSC 34 has expired. If the re-establish timer has expired in either the MS 10 or the MSC 34, the process moves to step 425 where the old configuration is deleted from the memory of the device in which the time expired" (see column 10, lines 53 to 58 of Virtanen). Thus, the re-establish timer merely sets the amount of time during which configuration information is saved so that the call may be quickly re-established by either the base station or the mobile station. The re-establish timer is not a timer based on which the status of a previously established data connection is checked in order to maintain an always-on connection as claimed herein.

Thus, Virtanen teaches a method for re-establishing an interrupted data packet call while shortening the time and decreasing signaling required to re-establish the interrupted data packet call. Virtanen achieves this by storing the current service configuration information until the expiry of related timers in the mobile and base stations. Nothing in Virtanen teaches or suggests maintaining an always-on connection as claimed herein.

Virtanen does not contemplate a service check timer for setting a minimum fixed interval after which a previously established data connection is checked to determine if it has been lost, simple because the problem solved by Virtanen is to quickly and efficiently re-establish interrupted packet data calls and not to establish and automatically maintain a data connection to a wireless data network as claimed herein.

Applicants respectfully submit that a person skilled in the art would not think to combine Hunzinger and Virtanen as suggested by the Examiner, as neither addresses, or even

mentions or suggests, the problem solved by the claimed invention, the problem being that of establishing and automatically maintaining a data connection to a wireless data network.

Thus, Hunzinger and Virtanen either alone or in combination fail to teach or suggest all the limitations of independent claims 12 and 21, and their respective dependent claims 2 to 6, 9, 10, 13-16, 18 and 22 to 27. Accordingly, at least for the reasons provided above, Applicants respectfully request that the rejections under 35 U.S.C. §103(a) be withdrawn.

Other Rejections

The Examiner rejected claims 7 and 8 as being obvious in view of Hunzinger, Virtanen and further in view of U.S. Patent No. 4, 827,507 (Marry); claim 17 as being obvious in view of Hunzinger and Virtanen; claim 19 as being obvious in view of Hunzinger, Virtanen and an Official Notice; and claim 20 as being obvious in view of Hunzinger, Virtanen and further in view of U.S. Publication No. 2002/0082032A1 (Hunzinger II).

Each of claims 7, 8, 17, 19, and 20 is dependent, directly or indirectly, from claim 12, and includes all the limitations of claim 12. Applicants reiterate the comments made above in respect of Hunzinger and Virtanen, and submit that, since neither Hunzinger nor Virtanen teach all the claimed limitations of independent claim 12, they cannot teach or reasonably suggest all the limitations of a narrower claim dependent from claim 12. Applicants further submit that none of Marry, the Official Notice or Hunzinger II teach or suggest a service check timer that determines the minimum fixed time intervals at which an established data connection is checked, as claimed herein.

Therefore, Applicants submit that there is no combination of the cited references that can teach or suggest all the claimed limitations in claims 7, 8, 17, 19, or 20, and no showing of *prima facie* obviousness can be made. Withdrawal of the rejections under U.S.C. §103(a) is respectfully requested.

It is submitted that this application is now in condition for allowance, and action to that end is respectfully requested.

No fee is believed due for this submission. However, Applicant authorizes the Commissioner to debit any required fee from Deposit Account No. 501593, in the name of Borden Ladner Gervais LLP. The Commissioner is further authorized to debit any additional amount required, and to credit any overpayment to the above-noted deposit account.

Respectfully submitted,

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